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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,272	02/14/2002	Robert K. Yang	1199-4	4926

7590 12/12/2006

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EXAMINER	
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ART UNIT	PAPER NUMBER
1734	

DATE MAILED: 12/12/2006

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/074,272
Filing Date: February 14, 2002
Appellant(s): YANG ET AL.

Jamie M. Larmann
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 29, 2006 appealing from the Office action mailed January 20, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,660,292	Zerbe et al	12-2003
5,881,476	Strobush et al	3-1999

5,629,003	Horstmann et al	5-1997
5,044,761	Yuhki et al	9-1991
6,231,957	Zerbe et al	5-2001
5,733,575	Mehra et al	3-1998
4,478,658	Wittwer	10-1984

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 119 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/768,809 in view of Yuhki et al (U.S. 5,044,761). Although the conflicting claims are not identical, they are not patentably distinct from each other because they both recite

combining a polymer component, an active component, and polar solvent, i.e. water, to form a matrix with a uniform distribution, forming a film from said matrix, providing a surface having top and bottom side, feeding said film onto said top side of said surface, and drying said film by applying heat to bottom side of said surface, which rapidly forming a visco-elastic film and prevent air flow migration and intermolecular forces from creating aggregates or conglomerates to maintain the uniform distribution of components. Although, claim 119 of instant application does not recite exposing the film to a temperature above a degradation temperature of the active component wherein the active component is maintained at a desired level, the claim does not exclude such limitation. The claim of copending application is silent as to deaerating the matrix by slow mixing. However, deaerating a mixture by mixing is well known and conventional as shown for example by Yuhki et al. Yuhki et al discloses a method of dissolving and deaerating powder material. The method includes feeding a liquid into tank, operating a motor at low to intermediate speeds to sufficiently stir a liquid, feeding a predetermined amount of powder material into the liquid, reducing pressure in tank (Col 4,lines 13-35) and switching the motor to high speed to provide a cavitation action to destroy the bubbles in the liquid (Col 4, lines 36-41), after a number of decompression, the motor is switched to low and the tank is returned to atmospheric pressure to prevent the bubbles to be supplied into the solution again (Col 4, line 63 to Col 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to slowly stir the liquid and powder mixture to deaerate the mixture as disclosed by Yuhki et al in the method of copending application to dissolve powder

material and to deaerated rapidly and easily with no bubbles being developed. (See Yuhki et al, Col 1, lines 5-11)

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 91, 93, 97, 100, 101, 106, 108,109, 111, 112, 114, 117, 119 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zerbe et al (U.S. 6,660,292) in view of Strobush et al (U.S. 5,881,476) and Yuhki et al (U.S. 5,044,761).

Regarding claims 91, 93, 97, 100, 101, 106, 108, 109, 111, 112, 114, 117, and 119, Zerbe et al ('292) discloses a method of forming flavored film. The method includes providing a polymer component such as hydroxypropyl cellulose, modified starch, flavoring and other ingredients in water to form a solution, i.e. a matrix, coating the matrix onto a carrier substrate such as kraft paper or siliconized polyethylene-terephthalate film (Col 5, lines 36-45) and drying the film with hot air and removing the film after drying (Col 6, lines 43-50). Zerbe et al ('292) is silent as to the hot air is applied to the bottom of the substrate with air current's velocity at the bottom is higher than the top or substantially no top air flow to dry the film to rapidly forming a visco-elastic film and preventing air flow migration and intermolecular forces from forming aggregates or conglomerates to maintain compositional uniform distribution and

deaerating the matrix by slow mixing. However, directing hot air to the bottom of the substrate with a higher air current at the bottom than the top or substantially no top air flow to dry the film is well known and conventional as shown for example by Strobush et al. Strobush et al discloses a method for drying a coating on a substrate. The method includes providing a substrate with a coating applied to the substrate (Col 8, line 66 to Col 9, line 8), providing a drying apparatus, feeding the coated substrate into the apparatus, where air foils (30) located below the coated substrate direct drying gas, i.e. heated air or hot air, to the bottom surface of the coated substrate (Col 9, lines 44-51) with air bars (34) to supply top-side gas or fresh air for added drying or to carry away evaporated solvent or no gas is supplied when top-side gas is not needed or desired (Col 11, lines 15-27) to dry the film without mottle defects, i.e. uniform thickness (Col 12, lines 27-31) or uniform density, which is without forming aggregates or conglomerates with uniform distribution of components.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to dry the coating on a substrate by directing drying gas to the bottom of the coated substrate as disclosed by Strobush et al in the method of Zerbe et al ('292) to dry the coating on a substrate without mottle and at a higher web speeds. (See Strobush et al, Col 6, lines 21-27) Zerbe et al ('292) as modified by Strobush et al is silent as to deaerating the mixture by slow mixing or controlling the mixing speed. However, deaerating a mixture by mixing is well known and conventional as shown for example by Yuhki et al. Yuhki et al discloses a method of dissolving and deaerating powder material. The method includes feeding a liquid into tank, operating a motor at

low to intermediate speeds to sufficiently stir the liquid, feeding a predetermined amount of powder material into the liquid, reducing pressure in tank (Col 4,lines 13-35) and switching the motor to high speed to provide a cavitation action to destroying the bubbles in the liquid (Col 4, lines 36-41), after a number of decompression, the motor is switched to low and returning the tank to atmospheric pressure and prevent the bubbles to be supplied into the solution again (Col 4, line 63 to Col 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to slowly stir the liquid and powder mixture to deaerate the mixture as disclosed by Yuhki et al in the method of Zerbe et al ('292) as modified by Strobush et al to dissolve powder material and to deaerated rapidly and easily with no bubbles being developed. (See Yuhki et al, Col 1, lines 5-11)

5. Claims 94 and 95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zerbe et al (U.S. 6,660,292) in view of Strobush et al (U.S. 5,881,476) and Yuhki et al (U.S. 5,044,761) as applied to claim 91 above, and further in view of Horstmann et al (U.S. 5,629,003).

Zerbe et al ('292) as modified above is silent as to the thickness of the film is at least 30 μm or at least 500 μm. However, forming an edible film with a thickness of at least 30 μm or at least 500 μm is well known and conventional as shown for example by Horstmann et al. Horstmann et al discloses a method of forming an edible film. The method includes providing a polymer matrix with starch and water (Col 3, lines 49-67 and forming the coating layer to a thickness of 0.003 to 4 mm (Col 4, lines 17-26.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an edible film with a thickness of 0.003 to 4 mm as disclosed by Horstmann et al in the method of Zerbe et al as modified by combination of references to provide an edible film having the desired physical characteristics, e.g. strength and texture.

6. Claim 96 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zerbe et al (U.S. 6,660,292) in view of Strobush et al (U.S. 5,881,476) and Yuhki et al (U.S. 5,044,761) as applied to claim 91 above, and further in view of Wittwer (U.S. 4,478,658).

Zerbe et al ('292) as modified above is silent as to the polymer matrix viscosity is about 400 to 100,000 cps. However, forming edible film using polymer matrix with a viscosity between 400 to 100,000 cps is well known and conventional as shown for example by Wittwer. Wittwer discloses a method of forming an edible film for label. The film is formed of material such as cellulose, starches, and carbohydrates (Col 4, lines 54-69) in a solution with water (Col 5, lines 10-24) and has a viscosity of 2,000 to 2,500 cps (Col 10, lines 37-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the matrix with a viscosity of 2,000 to 2,500 cps as disclosed by Wittwer in the method of Zerbe et al '292 as modified by combination of references to provide a material suitable for high speed commercial application. (See Wittwer, Col 3, lines 57-59)

7. Claims 98, 99, 102, and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zerbe et al (U.S. 6,660,292) in view of Strobush et al (U.S. 5,881,476) and Yuhki et al (U.S. 5,044,761) as applied to claim 97 and 101 above, and further in view of Zerbe et al (U.S. 6,231,957).

Zerbe et al ('292) as modified above is silent as to dividing the film into dosage form with equal dimensions, which has the same mass and thickness and packaging each individual dosage forms. However, dividing the film into dosage form with equal dimensions, which has the same mass and thickness and packaging the each individual dosage forms is well known and conventional as shown for example by Zerbe et al ('957). Zerbe et al ('957) discloses a method of forming an edible film. The method includes manufacturing the edible film using conventional coating and drying techniques, cut the film into pieces of a shape and size that meet the requirements of intended application, and packing the films or dosage into containers. (Col 3, line 65 to Col 4, line 16)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to cut the film into pieces of a shape and size that meet the requirement of intended application and packing the films or dosage into containers as disclosed by Zerbe et al ('957) in the method of Zerbe et al ('292) as modified by combination of references to provide an easy-to-use, cheap, and reproducible flavoring or intermediates. (See Zerbe et al ('957), Col 1, lines 18-21)

8. Claims 104 and 110 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zerbe et al (U.S. 6,660,292) in view of Strobush et al (U.S. 5,881,476), Horstmann et al (U.S. 5,629,003), and Yuhki et al (U.S. 5,044,761).

Zerbe et al ('292) discloses a method of forming flavored film. The method includes providing a polymer component such as hydroxypropyl cellulose, modified starch, flavoring and other ingredients in water to form a solution, i.e. a matrix, coating the matrix onto a carrier substrate such as kraft paper or siliconized polyethylene-terephthalate film (Col 5, lines 36-45) and drying the film with hot air and removing the film after drying (Col 6, lines 43-50). Zerbe et al ('292) is silent as to the hot air is applied to the film and the thickness of at least 500 μm and preventing air flow migration and intermolecular forces from forming aggregates or conglomerates to maintaining compositional uniform distribution and deaerating the matrix by slow mixing. However, directing hot air to the bottom of the coated substrate with a hot air current to dry the film is well known and conventional as shown for example by Strobush et al. Strobush et al discloses a method for drying a coating on a substrate. The method includes providing a substrate with a coating applied to a substrate (Col 8, line 66 to Col 9, line 8), providing a drying apparatus, feeding the coated substrate into the apparatus, where air foils (30) located below the coated substrate direct drying gas, i.e. heated air or hot air, to the bottom surface of the coated substrate (Col 9, lines 44-51) with air bars (34) to supply top-side gas or fresh air for added drying or to carry away evaporated solvent or no gas is supplied when top-side gas is not needed or desired (Col 11, lines 15-27) to dry the film without mottle defects, i.e. uniform thickness (Col 12, lines 27-31), or

uniform density, which is without forming aggregates or conglomerates with uniform distribution of components.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to dry the coating on a substrate by directing drying gas to the bottom of the coated substrate as disclosed by Strobush et al in the method of Zerbe et al ('292) to dry the coating on a substrate without mottle and at a higher web speeds. (See Strobush et al, Col 6, lines 21-27) Zerbe et al ('292) as modified above is silent as to the thickness of the film is at least 500 μm and deaerating the matrix by slow mixing. However, forming an edible film with a thickness of at least 500 μm is well known and conventional as shown for example by Horstmann et al. Horstmann et al discloses a method of forming an edible film for multiple dosage units. The method includes providing a polymer matrix with starch and water (Col 3, lines 49-67) and forming the coating layer to a thickness of 0.003 to 4 mm (Col 4, lines 17-26) with the individual dosage includes drugs, confectionary, cosmetics and other food (See abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an edible film with a thickness of 0.003 to 4 mm with either the active as being drugs, confectionary, cosmetics and other food as disclosed by Horstmann et al in the method of Zerbe et al ('292) as modified by combination of references to provide an edible film with any active having the desired physical characteristics, e.g. strength and texture. Zerbe et al ('292) as modified by the combination of references is silent as to deaerating the matrix by slow mixing. However, deaerating a mixture by mixing is well known and conventional as shown for

example by Yuhki et al. Yuhki et al discloses a method of dissolving and deaerating powder material. The method includes feeding a liquid into tank, operating a motor at low to intermediate speeds to sufficiently stir a liquid, feeding a predetermined amount of powder material into the liquid, reducing pressure in tank (Col 4,lines 13-35) and switching the motor to high speed to provide a cavitation action to destroying the bubbles in the liquid (Col 4, lines 36-41), after a number of decompression, the motor is switched to low and returning the tank to atmospheric pressure and prevent cavitation and the bubbles to be supplied into the solution again (Col 4, line 63 to Col 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to slowly stir the liquid and powder mixture to deaerate the mixture as disclosed by Yuhki et al in the method of Zerbe et al ('292) as modified by the combination of references to dissolve powder material and to deaerated rapidly and easily with no bubbles being developed. (See Yuhki et al, Col 1, lines 5-11)

9. Claim 116 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zerbe et al (U.S. 6,660,292) in view of Strobush et al (U.S. 5,881,476), Mehra et al (U.S. 5,733,575) and Yuhki et al (U.S. 5,044,761).

Zerbe et al ('292) discloses a method of forming flavored film. The method includes providing a polymer component such as hydroxypropyl cellulose, modified starch, flavoring and other ingredients in water to form a solution, i.e. a matrix, coating the matrix onto a carrier substrate such as kraft paper or siliconized polyethylene-terephthalate film (Col 5, lines 36-45) and drying the film with hot air and removing the

film after drying (Col 6, lines 43-50). Zerbe et al ('292) is silent as to the hot air is applied to the bottom of the substrate to dry the film and the matrix includes anti-foaming agent, preventing air flow migration and intermolecular forces from forming aggregates or conglomerates to maintaining compositional uniform distribution and deaerating the matrix by slow mixing. However, directing hot air to the bottom of the substrate with a higher air current at the bottom than the top or substantially no top air flow to dry the film is well known and conventional as shown for example by Strobush et al. Strobush et al discloses a method for drying a coating on a substrate. The method includes providing a substrate with a coating applied to a substrate (Col 8, line 66 to Col 9, line 8), providing a drying apparatus, feeding the coated substrate into the apparatus, where air foils (30) located below the coated substrate direct drying gas, i.e. heated air or hot air, to the bottom surface of the coated substrate (Col 9, lines 44-51) with air bars (34) to supply top-side gas or fresh air for added drying or to carry away evaporated solvent or no gas is supplied when top-side gas is not needed or desired (Col 11, lines 15-27) to dry the film without mottle defects, i.e. uniform thickness (Col 12, lines 27-31) or uniform density, which is without forming aggregates or conglomerates with uniform distribution of components.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to dry the coating on a substrate by directing drying gas to the bottom of the coated substrate as disclosed by Strobush et al in the method of Zerbe et al ('292) to dry the coating on a substrate without mottle and at a higher web speeds. (See Strobush et al, Col 6, lines 21-27) Zerbe et al ('292) as modified above is silent as

to the matrix includes anti-foaming agent and deaerating the matrix by slow mixing. However, providing an anti-foaming agent in the matrix of an edible film is well known and conventional as shown for example by Mehra et al. Mehra et al discloses a method of forming an edible film. The method includes providing a composition with enteric film forming polymer, detackifier, viscosity modifier and an antifoaming agent (Col 2, lines 45-50), which the anti-foaming agent would inherently release oxygen from the composition.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide anti-foaming agent to the matrix as disclosed by Mehra in the method of Zerbe et al ('292) as modified by Strobush et al to provide a less tacky coating or film. (See Mehra, Col 1, lines 65-67) Zerbe et al ('292) as modified by the combination of references is silent as to deaerating the matrix by slow mixing. However, deaerating a mixture by mixing is well known and conventional as shown for example by Yuhki et al. Yuhki et al discloses a method of dissolving and deaerating powder material. The method includes feeding a liquid into tank, operating a motor at low to intermediate speeds to sufficiently stir a liquid, feeding a predetermined amount of powder material into the liquid, reducing pressure in tank (Col 4,lines 13-35) and switching the motor to high speed to provide a cavitation action to destroying the bubbles in the liquid (Col 4, lines 36-41), after a number of decompression, the motor is switched to low and returning the tank to atmospheric pressure and prevent the bubbles to be supplied into the solution again (Col 4, line 63 to Col 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to slowly stir the liquid and powder mixture to deaerate the mixture as disclosed by Yuhki et al in the method of Zerbe et al ('292) as modified by the combination of references to dissolve powder material and to deaerated rapidly and easily with no bubbles being developed. (See Yuhki et al, Col 1, lines 5-11)

(10) Response to Argument

Appellants have argued that their specific problem deals with providing ingestible films that can be divided into equally sized dosage units having substantially equal amounts of each compositional component present (Page 15, lines 8-10 of Brief, Specification, Paragraph 13), however, if the composition of the components are uniform throughout the film, than any irregularity in the film such as raised ridges, or non-uniform thickness, pits, holes, air pockets, bubbles, or non-uniform concentration would prevent the dosage units from having equal amounts of each compositional component. Therefore, the examiner is taking the position that, to maintain the compositional uniform distribution of components would require uniform concentration or density or uniform thickness.

A. Claims 91, 93, 97, 100, 101, 106, 108, 109, 111, 112, 114, 117, and 119 are patentable over Zerbe in view of Strobush and Yuhki

In response to appellant's argument that the examiner was incorrect in stating that "mottle" is defined as uniform thickness or uniform density, it is submitted that this is a mischaracterization of the office action and, the examiner did not define "mottle" as uniform thickness or uniform density but referred to a film dried with the method of

Strobush to dry a film without mottle defects or one having uniform thickness or uniform density (See Office Action, Page 6, lines 12-14). The examiner meant that no mottle defects results in uniform thickness and uniform density. Furthermore, Strobush has defined "mottle" as "an undesirable defect because it detracts from the appearance of the finished product," (See Strobush, Col 1, lines 59-60). Therefore, the examiner interprets the non-uniform density as non-uniform distribution of components. Furthermore, Strobush recites other defects such as orange peel and Benard cells (See Strobush, Col 1, lines 44-58) and the method reduces or eliminates one or more coating defects such as mottle and orange peel (See Strobush, Col 6, lines 10-12).

Also, the appellant has misquoted Strobush as stating, "mottle" as "an undesirable surface defect because it detracts from the appearance of the finished product." The examiner would like to point out Strobush never define "mottle" as a "surface defect" but the term "surface defect" was introduced in the Declaration Under 37 C.F.R. § 1.132 by Dr. Rhyta Rounds.

1. Strobush is Nonanalogous Art

In response to appellant's argument that Strobush is nonanalogous art, it has been held that a prior art reference must either be in the field of appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the appellant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Strobush is reasonably pertinent to the particular problem with which the appellant was concerned, which is to dry a film coating by applying hot dry gas to the bottom of a

coated substrate. Furthermore, Strobush further recites the method or apparatus is suitable for a wide variety of coatings and recitation of the non-ingestible photothermographic, thermographic and photographic coatings using a highly volatile organic solvent are examples of coatings that can be dried. Strobush recites any mottle-susceptible material, such as graphic arts materials and magnetic media, can be dried using the above-described drying apparatus and methods (Col 16, lines 62-64) In addition, appellant's argument of "overcoming the problems of forming edible film strips for individual dosing of actives, particularly drugs, which are safe and effective for human consumption" is not commensurate in scope with the claims. The claims do not require the use of drugs. .

a. Appellants' problem was to obtain compositional uniformity throughout film suitable for human consumption whereas Strobush's problem was to reduce surface defects (mottle) in a finished photographic product

The above title mischaracterized Strobush since Strobush never states the defects are surface defects.

In response to appellants argument that appellants are solving a different problem, the examiner combine Strobush method with Zerbe et al with a different reason and therefore for solving a different problem such as reducing or eliminate coating defect such as mottle or orange peel (See Strobush, 6, lines 10-18). Furthermore, the method as recited is same as the drying process as recited by appellant by applying drying gas to the bottom of the coated substrate (See Strobush, Col 9, lines 4-51) and no drying gas is supplied to the top of the coated substrate if it is

not needed or desired (See Strobush, Col 11, lines 24-27), which would provide the same end result of providing a compositional uniformity. In addition, appellants argument of Strobush is a two-dimensional concern, the examiner disagrees, since the defects such as "mottle" and orange peel are three dimensional defects, with "mottle" having non-uniform density or concentration variation, and orange peel with pattern of spots or pits like an orange peel.

b. Strobush's problem was to reduce surface defects (mottle) in a finished photographic product

Again the above title mischaracterized Strobush since Strobush does not recite the defects are surface defects. Furthermore, the examiner notes the quote from the brief as quoting Strobush as defining "mottle" as " an undesirable defect because it detracts from the appearance of the finished product" (See Brief, Page 13, lines 10-12), which is without citing the "surface defects."

In response to appellant's argument of Strobush is directed to method and apparatus for producing non-ingestible photothermographic, thermographic and photographic coatings on a permanent, synthetic organic polymer substrate without mottle, the examiner disagrees, since these recitations are a preferred embodiment and Strobush further recites the method is suitable for a wide variety of coatings and "evaporable liquid vehicle," which would include water (See Strobush, Col 9, lines 1-18) as well as any mottle-susceptible material, such as graphic art material and magnetic media can be dried using the above-described drying apparatus and methods (See Strobush, Col 16, lines 52-64).

In response to appellant's argument one skilled in the art would not look to Strobush, the examiner disagrees, since Zerbe et al recites the ingestible coating on a substrate is dried with heated air in a drying oven, Strobush recited coated substrates are often dried using drying oven with drying gas and bringing the drying gas into contact with the coating in order to bring about evaporation of the solvent, which cause the coating defects (See Strobush, Col 1, line 59 to Col 2, line 2 and Col 2, lines 20-32), and the method and apparatus would reduce or eliminate coating defects (See Strobush, Col 6, lines 10-18).

In response to appellant's argument of mottle is wholly unrelated to the problem of achieving compositionally uniform film dosage units, the examiner disagrees, since Strobush defined "mottle" as non-uniform density (See Strobush, Col 1, lines 59-60), which is variation of concentration of materials in the film, and by removing mottle to provide a uniform concentration of materials in the film or uniform density.

In response to the table on Page 14:

(1) Strobush is not limited to photographic coating.

(2) Strobush is not limited to solvent MEK.

(3) Particle sizes not claimed.

(4) Rapid heating is a relative term.

(5) Benard cells not claimed.

(6) Strobush is not limited to organic solvent and other coating and solvent system may allow de-aeration.

(7) Strobush defines "mottle" as non-uniform density and removing "mottle" provided uniform density, which would require uniform concentration or uniform composition.

(8) Surface imperfections not claimed.

2. No Motivation to Combine Zerbe, Strobush, and Yuhki

a Zerbe and Strobush are directed to divergent teachings

In response to appellant's argument of Zerbe and Strobush teaching divergent subject matter, the examiner disagrees, since Strobush recites the method and apparatus are suitable for a wide variety of coatings (See Strobush, Col 9, lines 8-18) and the use of conventional drying oven causes coating defects (See Strobush, Col 1, line 59 to Col 2, line 3 and Col 2, lines 20-32) and at a higher web speeds (See Strobush, Col 6, lines 24-27), which one of ordinary skill in the art would look to Strobush to provide the teaching of drying at a higher web speeds. Furthermore, Strobush recitation of the organic solvent and photographic coatings with silver particles dissolved in volatile, toxic non-aqueous solvents are preferred embodiments and the method and apparatus are suitable for a wide variety of coatings (See Strobush, Col 9, lines 8-18) and therefore solving the same problem as appellants.

Appellant's mischaracterized Strobush of reciting "mottle" is a surface defects, but Strobush never states "mottle" is a surface defect and furthermore, Strobush recites the method and apparatus are suitable for a wide variety of coatings (See Strobush, Col 9, lines 8-18) and any mottle-susceptible material such as graphic art materials and magnetic media (See Strobush, Col 16, lines 62-64)

In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the instant case, the examiner relied on Strobush to provide the teaching of drying by directing dry gas to the bottom of the substrate to reduce or eliminate coating defects (See Strobush, Col 6, lines 10-18) and the method is suitable to a wide variety of coatings (See Strobush, Col 9, lines 8-18).

b. Strobush and Yuhki also are directed to divergent teachings

In response to appellant's argument of Strobush and Yuhki are directed to divergent teachings, the examiner disagrees, since Strobush recited the method is suitable to a wide variety of coating (See Strobush, Col 9, lines 8-18) and Strobush also recites the solvent is an "evaporable liquid vehicle" and water is an "evaporable liquid vehicle," (See Strobush, Col 9, lines 1-7) and therefore not a divergent teachings.

3. Strobush Teaches Away Form Water-base Ingestible Self-supporting Films

In response to appellant's argument of Strobush teaches away from water-base ingestible film, the examiner disagrees, since Strobush recites a wide variety of coatings are suitable for the method and apparatus (See Strobush, Col 9, lines 8-18) and

therefore, the examiner is taking the position the method and apparatus are suitable for both organic and aqueous solvents.

a. It is improper to select only bottom drying element from Strobush's complicated drying disclosure

In response to appellant's argument of improper to select only bottom drying element from Strobush's disclosure, the examiner disagrees, since the instant claims are open and does not exclude any further steps or features of Strobush and therefore, Strobush is incorporated as a whole to provide the teaching of the air bars to supply fresh air or inert gas to the top side of the coated substrate to carry away evaporated solvent however, if top side gas is not needed or desired no gas is supplied to the air bars (See Strobush, Col 11, lines 15-27) and therefore, the examiner is not picking and choosing only the bottom gas. Furthermore, the examiner disagrees with appellant's argument of the method of Strobush is a slow drying process since slow and rapid are relative terms and does not suggest how fast or slow the process and Strobush does recite the method allow for a higher web speeds than known drying method (See Strobush, Col 6, lines 24-27), which suggest a faster drying rate.

In response to appellants argument of Strobush's drying apparatus is directed to removing organic solvent from without causing the silver particles in the coating to be disrupted, the examiner disagrees since Strobush is not limited to coating with silver particle and highly volatile organic solvent.

In response to appellants' argument of macroparticles in an aqueous system, the argument is not commensurate in scope with the instant claims.

In response to appellants argument of appellants' rapid bottom heating causes a different phenomenon to take place, the examiner disagrees since both the appellants' and Strobush are drying the coating by heating the bottom of the coated substrate, the examiner is taking the position that the same phenomenon will take place.

b. Strobush involves highly volatile organic systems and teaches away from water-based systems

In response to appellant's argument of Strobush teaches away from water-base ingestible film, the examiner disagrees, since Strobush recites a wide variety of coatings are suitable for the method and apparatus (See Strobush, Col 9, lines 8-18) and therefore, the examiner is taking the position the method and apparatus are suitable for both organic and aqueous solvents. And furthermore, Strobush also teaches other coatings are suitable such as adhesive solutions, magnetic recording solutions, and priming solutions and the heat transfer rate would be different for each different solutions and requiring adjustment through experimentations and may provide a higher heat transfer rate with a coating solution with water or an aqueous-based system.

4. No Reasonable Expectation of Success

In response to appellant's argument of no reasonable expectation of success, Zerbe recites the edible film coating is dried with a drying oven using hot air (See Zerbe, Col 6, lines 48-56) and Strobush recites the apparatus and method replace the drying oven (See Strobush, Col 6, lines 28-41) of the prior art or conventional oven (See Strobush, Col 2, lines 20-32) therefore, the examiner would expects the method and apparatus can replace the drying oven of the prior art in Zerbe.

5. Hypothetical Combination of Zerbe, Strobush, and Yuhki Fails to Yield all of the Limitations of the Claims

In response to appellant's argument of the combination of Zerbe, Strobush, and Yuhki fails to yield all of the limitation of the claims, the examiner disagrees since Zerbe discloses the steps of forming the film by mixing the a premix (1) of water-soluble polymer and water to form solution (1), mixing a premix (2) with water to form solution (2), combining the two solution adding a flavor to the mixer, coating the mixture onto a substrate and drying. (See Zerbe, Col 6, lines 1-56) When a film is needed it is released from the carrier or substrate (See Zerbe, Col 5, lines 49-53). Yuhki provided the teaching of step deaerating the mixture during mixing. (See Yuhki, Col 3, lines 53-63) And finally, Strobush recites method of drying coating on a substrate by applying dry gas to the bottom. (See Strobush, Col 9, lines 44-51) Therefore, the combination of Zerbe, Strobush, and Yuhki recited all of the claim limitation.

B. Claims 94 and 95 Are Patentable Over Zerbe in View of Strobush, Yuhki, and Horstmann.

1. No Motivation to Modify Strobush to Dry the Thick Aqueous-Based Films of Claim 95

In response to appellant's argument of no motivation for combining Strobush and Horstmann, the examiner disagrees, the example thickness as recited by Strobush are preferred embodiments and Strobush does recite the method and apparatus are suitable for other coatings such as adhesive solutions, magnetic recording solutions, and priming solutions (See Strobush, Col 6, lines 10-18) and the motivation to combine

with Yuhki is provided by Yuhki to dissolved undisolved agglomeration and deaerated rapidly and easily with no bubbles being developed. (See Yuhki, Col 1, lines 5-11)

2. Horstmann Does Not Suggest Drying From the Bottom

In response to appellant's argument of Horstmann does not suggest drying form the bottom, that teaching is provide by Strobush.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

C. Claim 96 Is Patentable Over Zerbe In View of Strobush, Yuhki and Witwer.

In response to appellant's argument of Wittwer does not teach the process steps, the examiner relied on Zerbe, Strobush, and Yuhki to provide the teaching of the process steps and the above responses to Zerbe, Strobush, and Yuhki are applied.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

D. Claim 98, 99, 102, and 103 are Patentable over Zerbe in view of Strobush, Yuhki, and Zerbe '957

In response to appellant's argument of Zerbe '957 does not teach the process steps, the examiner relied on Zerbe, Strobush, and Yuhki to provide the teaching of the process steps and the above responses to Zerbe, Strobush, and Yuhki are applied.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

E. Claims 104 and 110 Are Patentable Over Zerbe in View of Strobush, Yuhki and Horstmann

In response to appellant's argument of Horstmann does not teach the process steps, the examiner relied on Zerbe, Strobush, and Yuhki to provide the teaching of the process steps and the above responses to Zerbe, Strobush, and Yuhki are applied.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

F. Claim 116 is Patentable over Zerbe in View of Strobush, Yuhki, and Mehra

In response to appellant's argument of Mehra does not teach the process steps, the examiner relied on Zerbe, Strobush, and Yuhki to provide the teaching of the process steps and the above responses to Zerbe, Strobush, and Yuhki are applied.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Chan Sing Po

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